

CLAIMS

1. An auxiliary mounting device for an in ceiling speaker system, comprising:

a ceiling reinforcing element; and

an elongate element,

wherein the ceiling reinforcing element includes a flat plate portion provided horizontally on a rear surface of a ceiling plate and having an opening at a center portion thereof, and a vertical portion provided to extend vertically from the flat plate portion,

the elongate element is provided to extend on a horizontal plane,

the vertical portion is mounted to the elongate element such that the vertical portion is capable of being in a slidable state and in a fixed state,

in the slidable state, the vertical portion is vertically slidable and displaceable with respect to the elongate element, and

in the fixed state, the vertical portion is fixed to the elongate element so as not to vertically displace.

2. The auxiliary mounting device for the in ceiling speaker system according to claim 1,

wherein the elongate element is one of a pair of elongate elements,

the vertical portion is one of a pair of vertical portions which are provided to extend vertically from the flat plate portion at substantially opposite positions with the opening interposed between the pair of vertical portions, and

the pair of elongate elements are provided substantially in parallel

with each other on the horizontal plane so as to respectively correspond to the pair of vertical portions.

3. The auxiliary mounting device for the in ceiling speaker system according to claim 1 or 2, further comprising:

an intermediate element mounted to the elongate element,

wherein the vertical portion is capable of being in a slidable state in which the vertical portion is vertically slidable and displaceable with respect to the intermediate element and in a fixed state in which the vertical portion is fixed to the intermediate element so as not to vertically displace with respect to the intermediate element, and

the vertical portion is mounted to the elongate element with the intermediate element interposed between the vertical portion and the elongate element such that the vertical portion is capable of being in the slidable state and the fixed state.

4. The auxiliary mounting device for the in ceiling speaker system according to claim 3,

wherein the intermediate element is mounted to the elongate element such that the intermediate element is capable of being in a first state and in a second state with respect to the elongate element,

in the first state, the intermediate element is slidable and displaceable with respect to the elongate element in a longitudinal direction of the elongate element, and

in the second state, the intermediate element is fixed to the elongate

element so as not to displace in the longitudinal direction of the elongate element.

5. The auxiliary mounting device for the in ceiling speaker system according to claim 3 or 4,

wherein the intermediate element includes a first mounting portion by which the intermediate element is mounted to the elongate element, and a second mounting portion by which the vertical portion is mounted to the intermediate element, and

the first mounting portion and the second mounting portion are located at different positions in a vertical direction.

6. The auxiliary mounting device for the in ceiling speaker system according to claim 5,

wherein the elongate element includes a first flat portion extending in band shape in the longitudinal direction of the elongate element, a second flat portion located adjacent the first flat plate portion so as to extend in band shape in the longitudinal direction of the elongate element, and a third flat portion located adjacent the second flat portion so as to extend in band shape in the longitudinal direction of the elongate,

the first flat portion, the second flat portion, and the third flat portion form a substantially U-shape in a transverse cross-section of the elongate element, and

the second flat portion is provided with a mounting portion by which the intermediate element is mounted to the elongate element.

7. The auxiliary mounting device for the in ceiling speaker system according to claim 1 or 2,

wherein in the slidable state, the vertical portion is slidable and displaceable with respect to the elongate element in the longitudinal direction of the elongate element, and

in the fixed state, the vertical portion is fixed to the elongate element so as not to displace in the longitudinal direction of the elongate element.